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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,496	12/26/2001	Scott S. Pegrum	9-13528-177US	9512

20988 7590 05/18/2006  
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CANADA

EXAMINER

HARPER, KEVIN C

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/025,496

Applicant(s)

PEGRUM ET AL.

Examiner

Kevin C. Harper

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 3/6/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-14 and 17-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,5-9,17-22,24 and 25 is/are rejected.
- 7) ☒ Claim(s) 3,4,10-14,23 and 26-29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

Applicant's arguments with respect to claims 2-14 and 17-29 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5-9, 17-22 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nair et al. (US 2002/0103921) in view of Brown et al. (US 4,710,926)

1. Regarding claims 2 and 17, Nair discloses an apparatus (fig. 2,) for providing packet forwarding (para. 14) comprising a service termination card (fig. 2, item 120; para. 106) having a packet forwarding engine for receiving and forwarding packets in accordance with an FIB (para. 33, last four lines), first and second control processors running asynchronously (fig. 2, items 170; fig. 5; paras. 31 and 104) having associated forwarding information bases (para. 30), and a means for the packet forwarding engine to forward packets in accordance with the first and second information base depending on the integrity of processes running on the respective processors (para. 104).
2. However, Nair does not disclose a heartbeat monitor for processors. Brown discloses a dynamic heartbeat monitor for processors (abstract, col. 1, lines 56-66). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have a heartbeat monitor for the processors in the invention of Nair in order to provide fault tolerance by using spare (backup) processors (col. 1, lines 50-53).

3. Regarding claim 5, in Nair the apparatus has an input/output interface (fig. 2, OC-48c, Gigabit, 10 Gigabit, etc. connections of the line cards).
4. Regarding claim 6, in Nair the apparatus comprises an OAM workstation (para. 27, lines 12-14; para. 78).
5. Regarding claims 7-8, in Nair the forwarding information base is an IP forwarding information base (para. 14; para. 30 - note: routing information base; para. 4; para. 11, lines 1-3) or an MPLS forwarding information base (para. 46 lines 5-6).
6. Regarding claims 9 and 18-22, in Nair the apparatus comprises a FIB manager (fig. 4, item 430; para. 107) for receiving FIB information and storing the information on a card.
7. Regarding claims 24-25, in Nair the hot-swapping is due to maintenance (para. 104, last four lines).

#### ***Allowable Subject Matter***

8. Claims 3-4, 10-14, 23 and 26-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

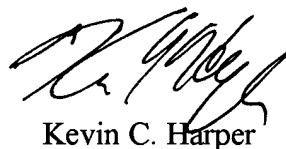
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 571-272-3166. The examiner can normally be reached weekdays from 11:00 AM to 7:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To, can be reached at 571-272-7629. The centralized fax number for the Patent Office is 571-

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273-8300. For non-official communications, the examiner's personal fax number is 571-273-3166 and the examiner's e-mail address is [kevin.harper@uspto.gov](mailto:kevin.harper@uspto.gov). Previous art units 2661-2668 have merged to form a new art unit 2616. A similar restructuring has taken place for all other art units in TC 2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications associated with a customer number is available through Private PAIR only. For more information about the PAIR system, see [portal.uspto.gov](http://portal.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin C. Harper

May 15, 2006